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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,374	11/19/2003	Jean-Francois Lafon	245516US41X DIV	-5478

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

TRAN, DALENA

ART UNIT	PAPER NUMBER
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3661

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Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

A

Office Action Summary	Application No. 10/715,374	Applicant(s) LAFON ET AL.	
	Examiner Dalena Tran	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/19/04, 2/20/04, 12/26/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 6/23/05. As per request, claims 21-23 have been added. Claims 1-23 are pending.

2. The 2 prior art submitted (2677149, and 2743921) have been considered.

The prior art submitted on 2/19/04, 2/20/04, and 12/20/04 have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 10-11, and 17-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bang et al. (5,715,163) in view of Snyder et al. (6,664,989).

As per claim 1, Bang et al. disclose a dialog method for dialog between an operator of an aircraft and at least one system of the aircraft, comprising the steps of: displaying on a display at least one window including a plurality of responsive objects respectively associated with one of multiple functions of the at least one system of the aircraft (see at least the abstract; and column 2, lines 53-67), and moving a cursor in a continuous manner on the display so as to designate a responsive object (see at least column 4, lines 5-27; column 5, lines 18-32; and columns 5-6, lines 46-5). Bang et al. do not explicitly disclose moving a cursor in a discrete manner. However, Bang et al. disclose "a manual input cursor control device is provided which is suited for receiving manual inputs from the flight crew to control the position of the cursor on the

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navigational display” (see at least column 1, lines 59-62). It is obvious to one of ordinary skill in the art that “a manual input” is a discrete action to control the position of the cursor on the display. Bang et al. also disclose “a keypad for allowing the typed entry of sequential waypoints” (see at least column 1, lines 62-65); also, “allowing the flight crew manually selecting waypoints via the cursor control device” (see at least column 2, lines 1-3); “keypad input” and “selecting waypoints by waypoint”, it is obvious that action is a discrete input; also, column 2, lines 64-67, “Upon the user activating one of the line select keys 22, 24, the adjacent line of text on the electronic display is activated to thereby allow entry, **selection or deletion** of text”. It is obvious to one of ordinary skill in the art that the entry, **selection or deletion** represent a discrete motion of cursor control. Also, Bang et al. disclose in column 3, lines 12-22, “a provided Execute key 32 is a momentary action pushbutton”, also “ a provided delete key 34 is a momentary action switch. it is obvious that the momentary action pushbutton or momentary action switch represent a discrete motion of cursor control, because the user perform an action **immediately and directly** to activate one object to another object.

Also, still in claim 1, it is well known that one of the function keys in the keypad can be programmed to perform a function of controlling a moving of cursor on the display, for example, directional function keys move up, down, right, and left. In addition, to modify for the teaching of moving the cursor in a discrete manner of Bang et al., Snyder et al. also disclose moving the cursor in a discrete manner on the display, responsive object by responsive object, so as to designate a responsive object (see at least the abstract; and columns 6-7, lines 53-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining moving a cursor in a discrete manner on the

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display for activating, pointing, or selecting quickly in the display screen to provide a faster rate of viewing and selection objects in the display.

As per claim 2, Bang et al. do not disclose a control ball on a mouse. However, Snyder et al. disclose moving the cursor in the continuous manner on the display with a control ball on a mouse (see at least column 3, lines 8-18). Bang et al., and Snyder et al. do not explicitly disclose an arrow key on a keyboard. However, Snyder et al. disclose discrete movement of the cursor, and “four buttons on CCD maybe programmed to correspond to left, right, up and down movements (column 7, lines 61-65). It would have been well known that these four buttons on CCD could be labeled as directional cursor (arrow) keys on the keyboard. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., by combining moving the cursor in the discrete manner on the display with an arrow key on a keyboard allow the operator to skip through plurality of screen display with convenient and faster rate.

As per claim 3, Bang et al. disclose activating a function associated with the responsive object designated by the step of moving a cursor in a continuous manner on the display (see at least column 4, lines 4-27; and column 5, lines 18-32). Bang et al. do not explicitly disclose activating a function associated with the responsive object designated by the step of moving a cursor in a discrete manner on the display. However, Snyder et al. disclose activating a function associated with the responsive object designated by the step of moving a cursor in a discrete manner on the display (see at least the abstract; and columns 6-7, lines 53-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining activating a function associated with the responsive object

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designated by the step of moving a cursor in a discrete manner on the display for providing a faster rate of viewing and selection objects in the display.

As per claim 4, Bang et al. disclose step of activating the function associated with the responsive object designated by the step of moving a cursor in a continuous manner on the display is performed with key on a mouse (see at least column 5, lines 18-32). Bang et al. do not disclose moving a cursor in a discrete manner with an Enter key on a keyboard. However, Snyder et al. disclose step of activating the function associated with the responsive object designated by the step of moving a cursor in a discrete manner on the display is performed with a multifunction keyboard (see at least column 3, lines 39-48). It is well known that a basic multifunction keyboard could be programmed to include a function Enter key. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining activating the function associated with the responsive object in a continuous manner on the display with an Enter key on a keyboard for executing a command and selection of data.

As per claim 5, Bang et al. do not disclose plurality of windows. However, Snyder et al. disclose the at least one window includes a plurality of windows, and moving the cursor discretely from one window to another window in the plurality of windows (see at least columns 3-4, lines 39-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining plurality of windows to provide multifunction communications between and operator and the aircraft system.

As per claim 6, Bang et al. do not disclose a default field. However, Snyder et al. disclose each window is divided into a plurality of fields each including at least one responsive object (see at

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least column 4, lines 32-65), and each window includes one default field on which the cursor arrives after moving from one window to another window (see column 4, lines 13-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining each window includes one default field for easily to locate the cursor position and located an object being selected to view.

Also, as per claim 7, Snyder et al. disclose each default field includes one default responsive object (see at least column 4, lines 32-65).

As per claim 10, Bang et al. disclose automatically moving the cursor to a responsive object via a single action by the operator (see column 3, lines 12-23; and column 5, lines 19-33).

As per claim 11, Snyder et al. disclose moving a cursor in a continuous manner on the display with a mouse (see at least column 3, lines 8-18), and moving the cursor in the discrete manner on the display with a keyboard (see at least column 3, lines 39-47).

As per claim 17, Bang et al. disclose a dialog method for dialog between at least one operator of an aircraft and at least one system of aircraft, comprising steps: moving a cursor on interactive window in an actuatable manner so as to designate a responsive object (see at least column 4, lines 5-27); and confirming designated responsive object either in an actuatable manner or using at least one confirmation key (see at least column 3, lines 12-40). Bang et al. do not disclose plurality of interactive windows. However, Snyder et al. disclose displaying on at least two interactive windows, each of at least two interactive windows including at least one responsive object associated with one of a plurality of functions of at least one system of aircraft, and moving cursor from window to window using an auxiliary displacement key (see at least columns 3-4, lines 39-65), and moving the cursor on interactive windows in a discrete manner,

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responsive object by responsive object, so as to designate a responsive object (see at least column 4, lines 13-31; columns 6-7, lines 53-35; and column 7, lines 60-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al. by combining plurality of windows to provide multifunction communications between and operator and the aircraft system.

Also, as per claims 18, and 23, Snyder et al. disclose moving cursor directly onto a responsive object associated with a function using a function key (see at least column 4, lines 13-65).

As per claims 19-20, Snyder et al. disclose displaying cursor at a default location in a window after moving cursor from one window to another window (see at least columns 3-4, lines 49-52).

As per claim 21, Bang et al. disclose confirming the designated object in an actuatable manner (see column 4, lines 5-27).

As per claim 22, Bang et al. disclose confirming the designated object using at least one confirmation key (see column 3, lines 12-40).

5. Claim 8, is rejected under 35 U.S.C.103(a) as being unpatentable over Bang et al. (5,715,163), and Snyder et al. (6,664,989) as applied to claim 5 above, and further in view of Westerman (6,404,443).

As per claim 8, Bang et al., and Snyder et al. do not disclose a Tab key. However, Westerman discloses step of moving one window to another window is performed with a Tab key on a keyboard (see at least column 5, lines 5-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., and

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Snyder et al. by combining moving one window to another window is performed with a Tab key on a keyboard for fast and conveniently select a desired window for viewing.

6. Claim 9, is rejected under 35 U.S.C.103(a) as being unpatentable over Bang et al. (5,715,163), and Snyder et al. (6,664,989) as applied to claim 1 above, and further in view of Oder et al. (5,475,594).

As per claim 9, Bang et al., and Snyder et al. do not disclose moving the cursor in the discrete manner on the display is activated during an emergency mode of the aircraft. However, Oder et al. disclose moving the cursor in the discrete manner on the display is activated during an emergency mode of the aircraft (see at least column 12, lines 11-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., and Snyder et al. by combining moving the cursor in the discrete manner on the display is activated during an emergency mode of the aircraft to provide an operator ability to accurately selecting a cursor location during periods of erratic vehicle moment that is easily to place the cursor in an unintended location of the display.

7. Claims 12-16, are rejected under 35 U.S.C.103(a) as being unpatentable over Bang et al. (5,715,163), and Snyder et al. (6,664,989) as applied to claim 1 above, and further in view of Muller et al. (6,072,473).

As per claim 12, Bang et al., and Snyder et al. do not disclose moving the cursor in a cyclical manner. However, Muller et al. disclose move the cursor discretely on the display, responsive object by responsive object, in a cyclical manner (see at least column 2, lines 35-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., and Snyder et al. by combining move the cursor discretely on

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the display, responsive object by responsive object, in a cyclical manner to allow the operator view through a whole cycle of information display.

As per claim 13, Bang et al., and Snyder et al. do not disclose plurality of displays. However, Muller et al. disclose the display includes a plurality of displays, and moving the cursor from one display to another display in the plurality of displays (see column 4, line 58 to column 5, line 39; and column 6, lines 62-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., and Snyder et al. by combining plurality of displays so the pilot and co-pilot in the airplane easy to view and interact with the system.

As per claim 14, Snyder et al. disclose each window includes a plurality of windows, each window is divided into a plurality of fields each including at least one responsive object (see column 4, lines 13-31), and each display includes one default field on which the cursor arrives after moving from one window to another window (see columns 3-4, lines 39-13).

As per claim 15, Snyder et al. disclose the cursor is moved from one display to another display via one of a key on a mouse and a key on a keyboard (see column 3-4, lines 39-13).

As per claim 16, Bang et al., and Snyder et al. do not disclose eight displays. However, Muller et al. disclose six displays (see column 3, line 36 to column 4, line 5), also Muller et al. disclose **plurality** of display allow multiple members of aircraft crew to share control of common flight information display areas (see the abstract). Eventhough, Muller et al. only has six displays. However, it is obvious to one of ordinary skill in the art that the suggest "plurality" means more than one, and means several, and it can be 3, 4, 6, 8, or 10, etc... Therefore, it is obvious that the display can include eight displays, of which three displays are for a pilot of the

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aircraft, three other displays are for the co-pilot, and two displays are for common use by the pilot and co-pilot. It is obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Bang et al., Snyder et al., and Muller et al. by combining 8 displays enabling the pilot to dialogue with multiple display information of use for piloting efficiently and safely.

Remarks

8. Applicant's argument filed on 6/23/05 has been fully considered. Upon updated search, the new ground of rejection as above.

Applicant's argue on pages 7-10, claim 1, that the combination of Bang and Snyder fails to teach "moving the cursor in a discrete manner on the display, responsive object by responsive object, so as to designate a responsive object". However, as already remark in section 6, page 9 of the last office action, in this office action this remark will be repeated. Bang et al. disclose in columns' 1-2, lines 67-3, "The logic means includes logic for allowing the flight crew to **select** a new or revised desired route by manually selecting waypoints via the cursor control device"; also, column 2, lines 64-67, "Upon the user activating one of the line select keys 22, 24, the adjacent line of text on the electronic display is activated to thereby allow entry, **selection or deletion** of text". It is obvious to one of ordinary skill in the art that the entry, **selection or deletion** represent a discrete motion of cursor control, because the user just need to press a function key to select or a delete key to delete an object after another object. It does not require continuous movement of finger in a select or delete key to select or delete an object.

Also, Bang et al. disclose in column 3, lines 12-22, "a provided Execute key 32 is a momentary action pushbutton", also " a provided delete key 34 is a momentary action switch", it

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is obvious that the momentary action pushbutton or momentary action switch represent a discrete motion of cursor control, because the user perform an action **immediately and directly** to activate one object to another object.

Also, Snyder et al. disclose in column 6, lines 63-65, “the **absolute movement** is mapped to a target on the display screen”, the absolute movement represent a discrete movement because it map an absolute target each movement. It is obvious that the absolute cursor movement confirm or designate responsive object by responsive object. Therefore, the rejection of claim 1 is maintained with the combination of Bang et al. and Snyder et al. references.

Applicant’s argue on the last paragraph, page 10, about claim 8, this rejection is withdrawn, and is replaced with Westerman reference in this office action as above. Also, claims 9-10, the new rejection is updated as above.

Applicant’s argue on the first paragraph, page 11, about claim 12, “ move the cursor discretely on the display, responsive object by responsive object, in a cyclical manner”, this rejection is changed as above.

Applicant’s argue on the last paragraph, page 11, about claim 16, “Muller only teaches six displays so that it does not teach eight displays”, the rejection for claim 16 is stand and the reason and motivation as above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Dalena Tran

A handwritten signature in black ink, appearing to read 'Dalena Tran', with a stylized flourish at the end.

September 5, 2005